

ALSTOM FRANCE S.A.

Method of laser welding overlapping sheets and  
corresponding railway vehicle body

ABSTRACT OF THE TECHNICAL CONTENT OF THE INVENTION

A first (5) of the sheets comprises, near the zone (6) of overlap, stiffening means (74) designed to resist the bending of the sheet along the zone of overlap. At least one region of the first sheet (5) is made to project, cantilever fashion, into the zone (6) of overlap. The stiffening means are located near this cantilevered region. A pressing mechanism of a laser welding installation (2) is made to press against another sheet (4) to hold the sheets in contact with one another at the zone (6) of overlap. The laser welding installation is used to weld the sheets together along the zone of overlap.

Application to the welding together, by transparency-welding, of sheets of the external skin of railway vehicle bodies.

Fig. 6.

PCT

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(54) Titre: PROCÉDE DE SOUDAGE LASER DE TOLES EN CHEVAUCHEMENT ET CAISSE DE VEHICULE-FERROVIAIRE CORRESPONDANTE

(57) Abstract

The invention concerns a welding method wherein one first (5) sheet metal comprises in the proximity of the overlapping zone (6) rigidifying means (74) adapted to withstand the sheet metal bending along the overlapping zone. The method consists in placing in cantilever at least one region of the first sheet metal (5) in the overlapping zone (6). The rigidifying means are arranged in the proximity of said cantilever region. A mechanism for supporting a laser welding installation (2) is applied on another sheet metal (4) to maintain the metal sheets in contact at the overlapping zone (6). The metal sheets are welded along the overlapping zone using the welding installation. The invention is useful for transparently welding together railway car body external covering metal sheets.

